TO:	Rebecca Sanders Barker & Associates	Date:	12 November 2025
COPY TO:	Halberd Holdings Limited	Document No:	10322-005-3
FROM:	Angela Tinsel		

WAIMAUKU WEST – FAST TRACK APPLICATION – PRELIMINARY ECOLOGICAL ASSESSMENT

Introduction

Halberd Holdings Limited (HHL) is intending to lodge a referral application for its proposed development of approximately 197 ha of land north-west of Waimauku township in Auckland ('the site') under the Fast-track Approvals Act. If the referral application is approved HHL would then lodge a substantive application using the fast-track process established under the Act. This memorandum provides a high-level ecological assessment of the proposal, including an evaluation of regional significance of the proposal's potential contributions to ecology.

The proposed development has been designed to maintain and enhance natural waterways and wetlands, in line with policies and objective of the National Policy Statement for Freshwater Management 2020 (NPS-FM), and with the National Environmental Standards – Freshwater (NES-F). It will include significant revegetation and ecological restoration, including along waterways and wetlands, in line with the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) and potential effects on fauna can be managed through appropriate mitigation such as fauna management plans. There will be an increase in native vegetation, and habitat for native fauna as a result of the proposed development.

Methodology

The assessment included a desktop review and site visits, undertaken by suitably qualified ecologists. The desktop review involved an examination of current and historical aerial imagery of the site, during which factors such as changes in vegetation and surface water were noted. A review of data on Auckland Council's Geomaps (such as current biodiversity layers, predicted watercourses and site topography) was also undertaken.

Site assessments were undertaken on 3, 6, 10 and 13 March[1]. Terrestrial values were qualitatively assessed by considering botanic and habitat value of vegetation on site (in particular, considering the quality of habitat for indigenous birds, bats and lizards). No formal fauna surveys were undertaken. The presence and extent of streams and wetlands across the site were noted and the quality of any freshwater habitat was visually assessed. Watercourses were classified as per the Auckland Unitary Plan Operative in Part (AUP-OP) definitions to determine, in accordance with the definitions in this plan, the ephemeral, intermittent or permanent status of the watercourse[2]. Potential wetland areas were

[1] The weather at the time of each site visit was fine. In the two weeks prior to the 3/03/2025 site visit there was 10 mm of rain, and 0 mm had fallen in the preceding 48 hours. During the survey period there was 5.5 mm of rainfall on 5/03/2025.

[2] Although the site assessment was undertaken outside of the Auckland Council recommended time period for classifying streams of July – October (Auckland Council, 2021), there was a high confidence in the watercourse classification as classified watercourses were determined based on criteria that are not season dependent.

assessed in accordance with wetland delineation protocols (MfE 2022, Clarkson 2014) to determine if an area met the regulatory definition of 'natural inland wetland' (NPS-FM 2020). Potential wetland areas were assessed based on the prevalence of certain vegetation species and their indicator status ratings, as defined in Clarkson et. al. (2021):

- Obligate wetland (OBL) vegetation, which almost always is a hydrophyte (a plant which only grows in wet environments), rarely found in uplands (non-wetland areas).
- Facultative wetland (FACW) vegetation, which usually is a hydrophyte but can occasionally be found in uplands.
- Facultative (FAC) vegetation, which is commonly either a hydrophyte or non-hydrophyte.
- Facultative upland (FACU) vegetation, which is occasionally a hydrophyte but is usually found in uplands.
- Upland (UPL) vegetation, which is rarely a hydrophyte and is almost always found in uplands.

Existing Environment

Background

The township of Waimauku is located immediately to the south-east of the site, with Huapai and Kumeū located further to the east and Muriwai Beach 6.5 km to the west. The wider area is mainly in rural land uses. State Highway 16 runs along the southern boundary of the site and the North Auckland Line railway runs along the northern boundary.

The site straddles two ecological districts – the Eastern Northland (Rodney) Ecological District and the Kaipara Ecological District. Auckland Council's Geomaps Ecosystem extent layers indicate that historically (pre-human), the majority of the site would have likely contained the ecosystem type 'tōtara, kānuka, broadleaved forest (dune forest)' (WF5). Soils are derived from coastal sands from a wide range of rock types and soil fertility is generally low. On the eastern edge of the site an area of swamp mosaic would have been present. These ecosystem types would have supported a diverse community of invertebrates, amphibians, reptiles, birds and bats (Singers *et. al.* 2017).

A review of the historical aerial imagery showed that the site and much of the surrounding landscape was cleared over 80 years ago for agricultural purposes. Currently, the site contains two residential dwellings and a number of buildings associated with agriculture. Most of the site is currently used to raise bulls, with some pig rearing and a yard for landscaping supplies located in the western portion of the site.

Terrestrial ecology

Vegetation

Utilising observations from the site visit and aerial imagery, the vegetation within the site has been classified and mapped. Maps showing the terrestrial vegetation types present on the site are provided in Appendix A.

Most of the site is in managed pasture, which is used for stock grazing and is of **low** botanical value.

There are several stands of remnant native vegetation on the site. Three of these areas have been classified as Significant Ecological Area (SEA) in the AUP-OP because of factors relating to representativeness, threat status and rarity and diversity (SEA_T_6310, SEA_T_6310a and SEA_T_6311,

Schedule 3, AUP-OP). Another two areas have been identified as being of SEA quality because of factors relating to representativeness and their proximity and connectivity to the other areas of SEA vegetation, and wetland and stream habitats.

Indigenous canopy species in the remnant stands of vegetation include tōtara (*Podocarpus totara*), kauri (*Agathis australis*), pūriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*), kānuka (*Kunzea robusta*), tānekaha (*Phyllocladus trichomanoides*), and kahikatea (*Dacrycarpus dacrydioides*). In some of these areas there is little understory due to cattle access and grazing, however where understory is present, species include kiekie (*Freycinetia banksii*), wheki (*Dicksonia squarrosa*), mamaku (*Sphaeropteris medullaris*), kaikōmako (*Pennantia corymbosa*), *Coprosma areolata*, *C. rhamnoides*, cabbage tree (*Cordyline australis*), nīkau (*Rhopalostylis sapida)*, *Muehlenbeckia complexa,* kawakawa (*Piper excelsum*), supplejack (*Ripogonum scandens*), climbing rātā (*Metrosiderous fulgens*), *Blechnum filiforme*, *Deparia petersenii*, lance fern (*Loxogramme dictyopteris*), hound's tongue fern (*Zealandia pustulata*), *Carex* spp., rasp fern (*Blechnum parrisiae*), and basket grass (*Oplismenus hirtellus*). Exotic species present include pampas (*Cortaderia selloana*), tree privet (*Ligustrum lucidum*), Chinese privet (*Ligustrum sinense*), woolly nightshade (*Solanum mauritianum*). The botanical value of native vegetation dominated areas on the site range from **low-moderate** to **high**.

Mixed native and exotic vegetation occurs mainly along the boundaries of the site. These areas are generally long and narrow in shape or small fragmented patches. Native species present include kānuka, tōtara, cabbage tree, tītoki (*Alectryon excelsus*), *C. robusta*, red mapou (*Myrsine australis*), ponga (*Alsophila dealbata*), kumarahou (*Pomaderris kumeraho*), nīkau and bracken (*Pteridium esculentum*). Exotic species include gum (*Eucalyptus* sp.), tree privet, macrocarpa (*Hesperocyparis macrocarpa*), woolly nightshade, pampas, Japanese honeysuckle (*Lonicera japonica*), Chinese privet, moth plant (*Araujia hortorum*), ink weed (*Phytolacca octandra*), kikuyu (*Cendrus clandestinus*), agapanthus (*Agapanthus praecox*), ginger (*Hedychium gardnerianum*), blackberry (*Rubus fruticosus*). These areas are considered to be of **low-moderate** botanical value.

Areas dominated by exotic vegetation mainly occur around the two dwellings and along the boundaries of the site. Species present include bamboo (*Phyllostachys* sp.), gum, pine (*Pinus* sp.), willow (*Salix* spp.), oak (*Quercus* sp.), tree privet, lillipilli (*Syzygium smithii*), macrocarpa, poplar (*Populus sp.*) and *Juniperus* sp. These areas are generally considered to be of **low** value, although may provide some fauna habitat values such as for bats or birds.

There are some areas of weedy vegetation and rank grass on the site. These are mainly associated with fenced areas around ecological features such as wetlands and native forest remnant patches, although there are a few small patches associated with steeper stream / gully banks. These areas are mainly rank pasture grasses, with some other species such as blackberry, gorse (*Ulex europaeus)* and bracken. These areas are considered to be of **low** botanical value, although they may provide fauna habitat such as for lizards or birds.

Fauna

The long-tailed bat (*Chalinolobus tuberculatus*, Threatened – nationally critical) has been recorded within 10 km of the site and the vegetation present within the site provides some potential habitat for bats. This includes mature trees, including exotic and individual trees within the site, some of which have features such as holes, splits and loose bark. There are limited vegetated corridors on the site for foraging and travelling, although the remnant native vegetation patches do provide some of this habitat

and link to the Waimauku Stream and Kaipara River to the east and north of the site. The value of the site for bats is considered to be **low** for the pasture dominated areas of the site and **moderate** for the native vegetation remnants and larger trees on the site.

Lizard habitat within the site was largely limited to the areas of native, mixed native / exotic vegetation and weedy vegetation / rank grass. The areas of native vegetation and mixed native/exotic vegetation may provide habitat for arboreal geckos such as elegant gecko (*Naultinus elegans*; At Risk - Declining), forest gecko (*Mokopirirakau granulatus*; At Risk - Declining) and Pacific gecko (*Dactylocnemis pacificus*; Not Threatened), as well as copper (*Oligosoma ornatum*; At Risk - Declining) and ornate skinks (*Oligosoma ornatum*, At Risk – Declining) amongst leaf litter/logs/woody debris. Areas of unmaintained rank grasses and dense garden/amenity plantings may provide copper skink habitat. The ecological value of the site for lizards, including lizard habitat, are considered to be **moderate**.

Avifauna (bird) habitat within the site included the areas of native vegetation, mixed native/exotic vegetation and amenity plantings, shelterbelts, isolated trees and rank grass / weedy vegetation which may provide nesting and roosting habitat. The extensive pasture across the site provides habitat for a limited number of species. The dominant avifauna community within the site is expected to contain a combination of common exotic and native species that are abundant in the wider Auckland region in urban fringe, rural and to a lesser extent forest habitat. Indigenous birds observed or heard on the site included fantail (*Rhipidura fuliginosa*, Not Threatened), kākā (*Nestor meridionalis,* At Risk - Recovering), masked lapwing (*Vanellus miles,* Not Threatened), paradise shelduck (*Tadorna variegata*, Not Threatened), pipit / pīhoihoi (*Anthus novaeseelandiae*, At risk – declining), pūkeko (*Porphyrio melanotus*, Not Threatened), swamp harrier / kāhu (*Circus approximans*, Not Threatened), tūī (*Prosthemadera novaeseelandiae*, Not Threatened) and white-faced heron / matuku moana (*Egretta novaehollandiae*, Not Threatened). It is possible that the Nationally Critical Australasian bittern (*Botaurus poiciloptilus*) may occur within the wetland areas from time to time as it has been observed occasionally at nearby sites. The ecological value of the site for avifauna was considered to be **moderate**.

Freshwater ecology

Streams

The Kaipara River flows east to west north of the site before heading north to discharge into the Kaipara Harbour north of Helensville. Several tributaries of this river run through the site and close to the western and eastern boundaries.

The stream flowing along the western boundary of the site is 2 – 3 m in width, has a soft bottom and is low gradient. It may have been straightened in the past and there is evidence of channel maintenance and sediment removal having been undertaken in the past. This stream is fenced from stock and is partly shaded by mixed native and exotic vegetation in its margins and there are dense macrophyte growths present in places.

The permanent stream flowing through the central western part of the site is mainly soft bottomed, with exposed areas of bedrock in places, generally 1 – 2 m wide and of a low gradient. It has some variety of instream habitat types such as pools, runs and dense growths of macrophytes. Stock have access to most of this stream channel and there is little riparian vegetation and therefore there is a low level of shading and nutrient loadings are likely high.

The streams running through the SEA classified areas of bush are small in nature with limited water present at the time of the site visit. They are generally well shaded and with limited or no stock access. In their lower reaches they grade into wetland habitat.

Other streams on the site are generally small and some have had some level of modification in the past such as straightening, deepening or channel clearance works. There is often wetland associated with their margins or they grade between defined channel and wetland.

Indigenous fish species present within the Kaipara River and its tributaries in the vicinity of the site (as indicated by NZ Freshwater Fish Database records) include four species with a conservation status of At Risk – Declining: torrentfish (*Cheimarrichthys fosteri*), longfin eel (*Anguilla dieffenbachii*), īnanga (*Galaxias maculatus*), and black mudfish (*Neochanna diversus*). Other indigenous fish species include banded kōkopu (*Galaxias fasciatus*; Not Threatened), common bully (*Gobiomorphus cotidianus*; Not Threatened), common smelt (***Retropinna retropinna***; Not Threatened), Cran's bully (***Gobiomorphus basalis***; Not Threatened), redfin bully (***Gobiomorphus huttoni***; Not Threatened), upland bully (***Gobiomorphus breviceps***; Not Threatened), shortfin eel (***Anguilla australis***; Not Threatened). Some of these species will be present within the waterways of the site, although several barriers to fish passage (including artificial and natural features such as perched culverts and bedrock runs) restrict access to some species, particularly in the central stream system of the site.

Overall, the current ecological value of the streams on the site range from **low** or **low-moderate** for the streams lacking riparian vegetation and with stock access, to **moderate – high** for streams with a good amount of riparian vegetation and no to low levels of grazing.

Wetlands

There is a network of wetlands present across the site within the low-lying valley areas. Most of the wetlands are along the base of modelled overland flow paths, are grazed, long and narrow in shape, with no or little riparian vegetation. They typically have a flora dominated by the exotic mercer grass (*Paspalum distichum*, FACW) and a mix of other (mainly exotic) species such as soft rush (*Juncus effusus*, FACW), lotus (*Lotus pedunculatus*, FAC), creeping buttercup (*Ranunculus repens*, FAC), Yorkshire fog (*Holcus lanatus*, FAC), water pepper (*Persicaria decipiens*, OBL), creeping bent (*Agrostis stolonifera*, FACW), *Galium palustre* (OBL), and *Isolepis prolifera* (OBL) in the wetter areas. The majority of these wetlands are currently considered to be of **low** ecological value because of the low diversity of indigenous species, hydrological homogeneity and the significant impacts of years of farming practise (e.g. runoff, stock damage, alteration).

In a few areas the grazed wetlands are wider and more substantial in size, with a greater diversity of hydrological conditions and an increased range of flora species present in addition to the above such as swamp millet (*Isachne globosa*, OBL), *Eleocharis acuta* (OBL), *Machaerina rubiginosa* (OBL), *Juncus edgariae* (FACW), *Juncus pallidis* (FACW), swamp kiokio (*Blechnum minus*), mānuka (*Leptospermum scoparium*) and cabbage tree. These wetlands are considered to be **moderate** in ecological value.

Some wetlands in the east and north-east of the site are fenced, are connected to or within SEA classified areas, and while there is some evidence of stock access in places, they are generally have a wider diversity of species present in addition to those listed above such as raupō (*Typha orientalis*, OBL), *Schoenoplectus tabernaemontani* (OBL), *Cyperus ustulatus* (FACW), kahikatea, *Carex* species, and *Machaerina articulata* (OBL). These wetlands are considered to be of **high** ecological value.

Assessment of Effects

Proposal

HHL intends to develop the site to enable an extension of the existing Waimauku settlement. The proposal will result in approximately 1600 residential dwellings at a range of densities including lifestyle blocks (4000m² site area) to large lot residential (1000m² site area), single house (300-400m² site area) and medium density (150m² site area with some attached). The proposal also includes light industrial development in the west fronting Great North Road and a neighbourhood Centre. There is a proposed green network weaving through the development providing for open space, stormwater management and revegetation. This network largely aligns with the ecological features of the site. A master plan for the development is provided in Attachment B.

As part of the proposed works HHL intends to undertake the following activities relating to ecological management:

- Covenanting non-covenanted SEA areas and indigenous vegetation that meets the definition of an SEA under Schedule 3 of the AUP-OP.
- Restore areas of existing vegetation by undertaking pest plant and animal control (i.e., in SEAs and unrecognised high-value vegetation areas).
- Planting and covenanting of 10 m riparian margins for streams and wetlands present on site where appropriate, e.g. outside of crossings.
- Cessation of stock grazing.

Reclamation or removal of key ecological features, as presented in the draft master plan, will largely be avoided by incorporation of most streams, wetlands and native vegetation within the open space or larger lots. It is noted that the proposal provides further opportunities for enhancement, for example, through additional planting activities, which can increase connectivity, diversity and buffering on site. These can be explored as part of detailed design and consent application stage.

Effects on terrestrial values

Terrestrial ecological values on site are mainly within the areas of SEA and other high quality native vegetation and their margins, which offer potential habitat for indigenous fauna. In accordance with the NPS-IB, HHL does not propose to remove this vegetation. Removal would result in adverse effects such as loss of ecosystem representation and extent, fragmentation or a reduction in the population size or occupancy of Threatened or At Risk species within SEAs. Rather, the proposed protection (i.e., creating additional covenants, cessation of grazing) and enhancement (e.g. pest plant control) of SEA and other potential priority areas will allow for an increase in habitat quality, native vegetation diversity, ecological connectivity and buffering function of terrestrial vegetation on site. Control of predators such as rats and mustelids will greatly decrease predation pressure on native fauna such as lizards, bats and birds, and an increase in their populations, if present, within the site. Additionally, the intended riparian and wetland buffer planting will further greatly increase indigenous terrestrial ecological values by increasing ecological connectivity, indigenous plant species diversity and abundance, and habitat values. In light of Auckland's history of biodiversity loss and ecosystem fragmentation, this proposal presents a significant opportunity for biodiversity gain within the region.

If adverse effects on indigenous biodiversity arise and are unavoidable, the effects management hierarchy will be applied to ensure the proposed activities meet the objective and polices of the NPS-IB

and adverse effects are managed appropriately. Any potential direct effects on indigenous fauna can be appropriately managed through fauna management plans. If the relocation of native lizards is required than a Wildlife Act Authority (permit) through the Department of Conservation would be required.

The removal of other, low-value vegetation (i.e., pasture and amenity plantings) for future developments is considered appropriate for the site and will not result in a significant loss of ecological function or terrestrial habitat. As noted above, there are opportunities for additional planting (e.g. parks, street trees, on-lot trees), which have the potential to add to the ecological benefits achieved by the proposal, and can be explored at a later stage.

Effects on freshwater values

The site's existing freshwater values are associated with the networks of streams and natural inland wetlands. At future consenting stages, the nature and quality of these features will be further described. However the initial assessment has shown that most of these features on the site are degraded and adversely affected by the current land use and previous modifications, offering poor-quality habitat for freshwater fauna. There are some areas of higher quality habitat in fenced areas of the east and north-east of the site.

As shown in the draft master plan the proposal has been designed around the key ecological features of the site such as streams and wetlands. The proposal will seek in the first instance to avoid the reclamation or modification of these features, however, reclamation may be required if avoidance cannot be achieved. The effects of any adverse impacts will be managed at future application stages, ensuring that the mitigation hierarchy is appropriately applied.

Through proposed riparian margin planting and the creation of additional covenants, the proposal is expected to promote an improvement in water quality (i.e., via increased filtration function of riparian vegetation), shading, bank stability and in-stream fauna habitat, while providing buffer and connectivity function. As many of the existing wetland and stream habitats are currently in poor condition, these restorative actions represent an overall increase in freshwater value.

Earthworks, diversions and discharges within 100 m of the wetlands can be managed to ensure the hydrological function and water level range of the wetlands is not significantly impacted.

Indirect adverse effects, such as sedimentation or pollution from stormwater or wastewater discharges, are proposed to be adequately mitigated through appropriate controls and following best practice guidelines, to help ensure adverse effects on ecological values are no more than minor. If adverse effects on streams or wetlands are unavoidable, the effects management hierarchy will be applied to ensure the proposed activities meet the relevant standards within the NES-F.

Relevant legislation

The proposal is considered to align with the policies and objective of key pieces of environmental legislation, such as the NPS-FM and the NPS-IB.

The main objective of the NPS-FM is to ensure the health and well-being of water bodies and freshwater ecosystems are prioritised. To prioritise the health and well-being of freshwater ecosystems on site, HHL has engaged Viridis to map these features, so that the development can be designed around them. Potential significant adverse effects for future development will be able to be appropriately avoided, minimised, remedied or offset under the effects management hierarchy and will be able to meet the relevant standards of the NES-F. Furthermore, the proposal will result in the establishment of planted

and protected riparian margins, and the exclusion of cattle, which will improve the overall quality of freshwater environments on site.

The main objective of the NPS-IB is to ensure, at a minimum, that no overall loss in New Zealand's biodiversity occurs by protecting and restoring indigenous biodiversity values. The proposal is considered to be consistent with the objectives of the NPS-IB, as the biodiversity values of the site have been identified, qualitatively assessed, and no overall loss in indigenous terrestrial biodiversity is anticipated as a result of the urbanisation of the site. Rather, the proposal provides the opportunity to improve the site's terrestrial biodiversity through protection and enhancement activities, which will improve the overall diversity, native species habitat and quality of the site's terrestrial features. The restoration actions proposed by Halberd Holdings Limited align with the priorities of Clause 3.21 of the NPS-IB by prioritising the restoration of SEAs, threatened ecosystems, areas that offer connectivity and buffering functions, and natural inland wetlands on site. Furthermore, these proposed restoration actions, including the planting of riparian margins and wetland buffers, will greatly increase indigenous terrestrial ecological values by increasing ecological connectivity, indigenous plant species diversity and abundance, and habitat values. These benefits will provide a significant positive contribution in relation to the regional indigenous biodiversity loss Auckland has historically experienced.

Conclusion

The potential impacts of HHL's proposed development at Waimauku have been assessed in relation to the ecological values currently associated with the site. These include areas of high-value indigenous vegetation and a network of low to high value streams and wetlands. The proposal's initial design avoids the removal of the vast majority of these existing features and along with mitigation measures for indirect effects (e.g. suitable stormwater and wastewater management) will prevent loss of the site's biodiversity values. The proposal presents ample opportunity for the enhancement and protection of existing features, with specifics to be determined during detailed design. Given the proposed ecological enhancement activities, it is considered that the development's contribution to environmental value would be regionally significant.

References

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Clarkson BR, Fitzgerald NB, Champion PD, Forester L, Rance BD 2021. New Zealand wetland plant list 2021. Manaaki Whenua - Landcare Research contract report LC3975 for Hawke's Bay Regional Council.

MfE 2022. Wetland Delineation Protocols. Ministry for the Environment.

Singers N.; Osborne B.; Lovegrove T.; Jamieson A.; Boow J.; Sawyer J.; Hill K.; Andrews J.; Hill S.; Webb C., 2017. Indigenous terrestrial and wetland ecosystems of Auckland. Auckland Council.

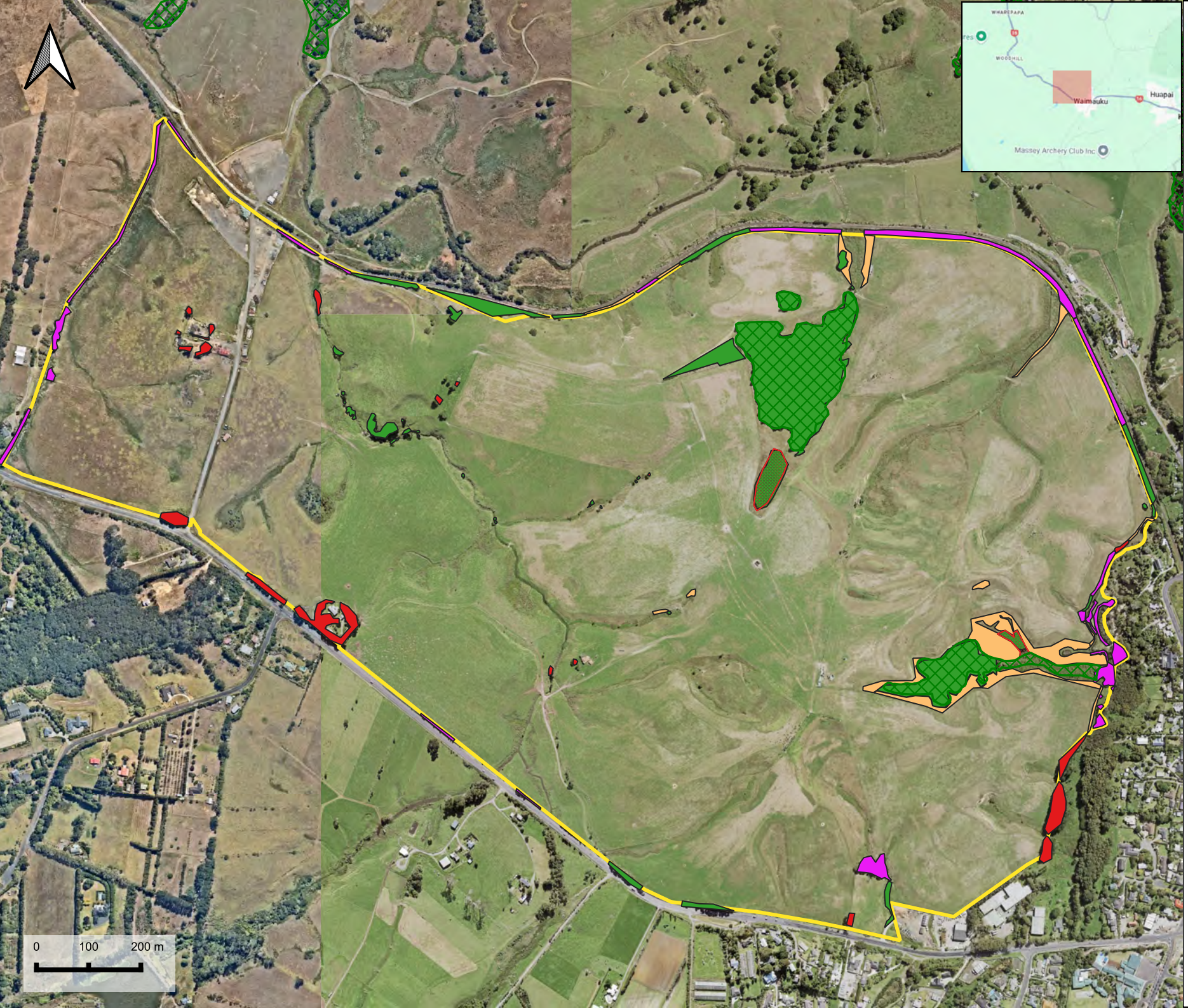
Attachments

Attachment A – Ecological Constraints Plans

Attachment B – Draft Master Plan

Attachment A

Ecological Constraints Plans



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Ecological Constraints Overview - Terrestrial

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site
- Significant Ecological Area (SEA)
- Proposed SEA

Vegetation

- Exotic trees dominant
- Mixed native / exotic
- Native trees dominant
- Weedy vegetation / rank grass

SOURCES

Aerial sources: Nearmap 2025, Auckland Council 0.075m Urban Aerial Photos 2017

DISCLAIMER:
This map/plan is not an engineering draft. This map/plan is illustrative only and all information should be independently verified on site before taking any action.

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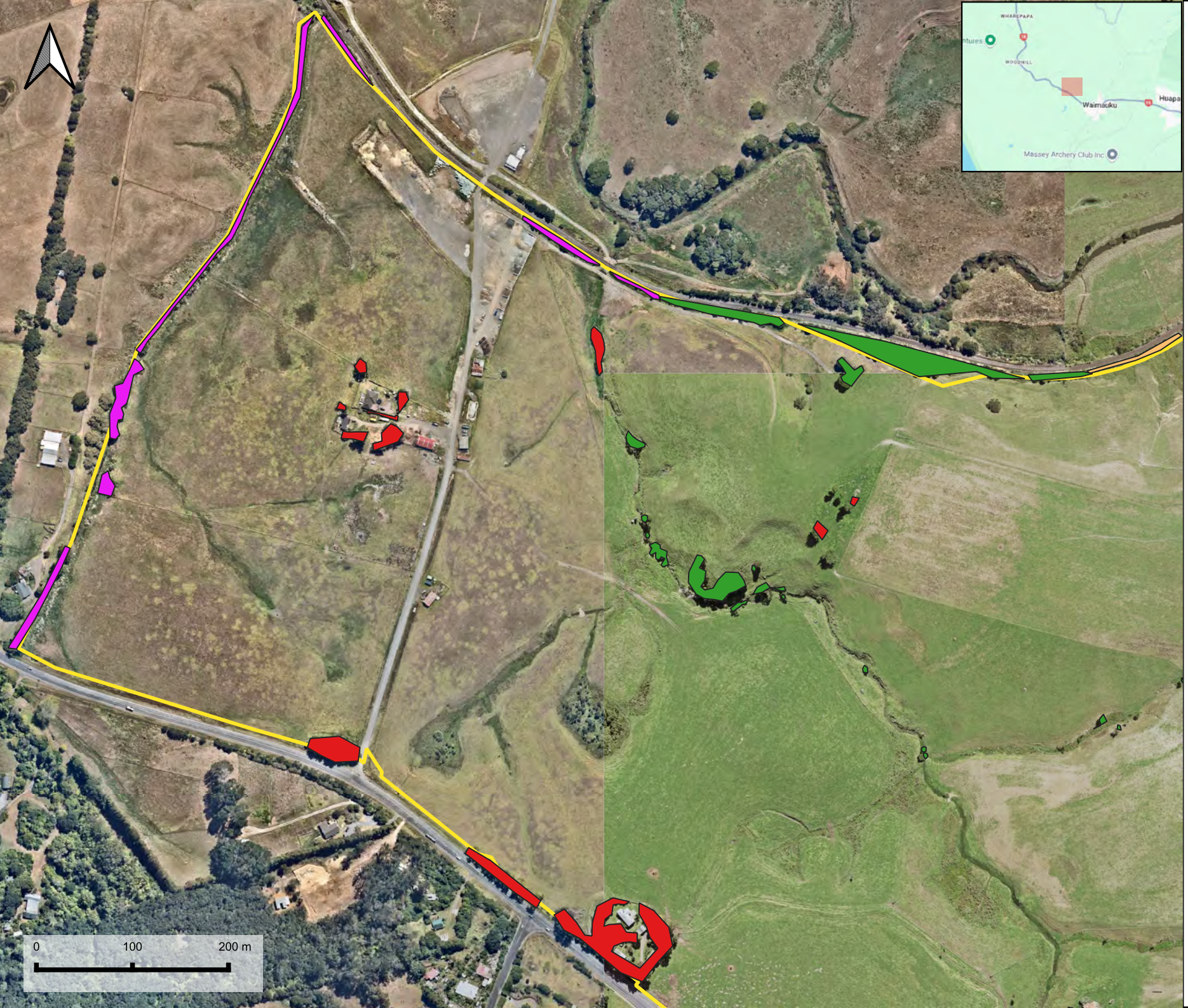

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Ecological Constraints - Terrestrial - western side

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site

Vegetation

- Exotic trees dominant
- Mixed native / exotic
- Native trees dominant
- Weedy vegetation / rank grass

SOURCES

Aerial sources: Nearmap 2025, Auckland Council 0.075m Urban Aerial Photos 2017

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Ecological Constraints - Terrestrial - eastern side

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site
- Significant Ecological Area (SEA)
- Proposed SEA

Vegetation

- Exotic trees dominant
- Mixed native / exotic
- Native trees dominant
- Weedy vegetation / rank grass

SOURCES

Aerial sources: Nearmap 2025, Auckland Council 0.075m Urban Aerial Photos 2017

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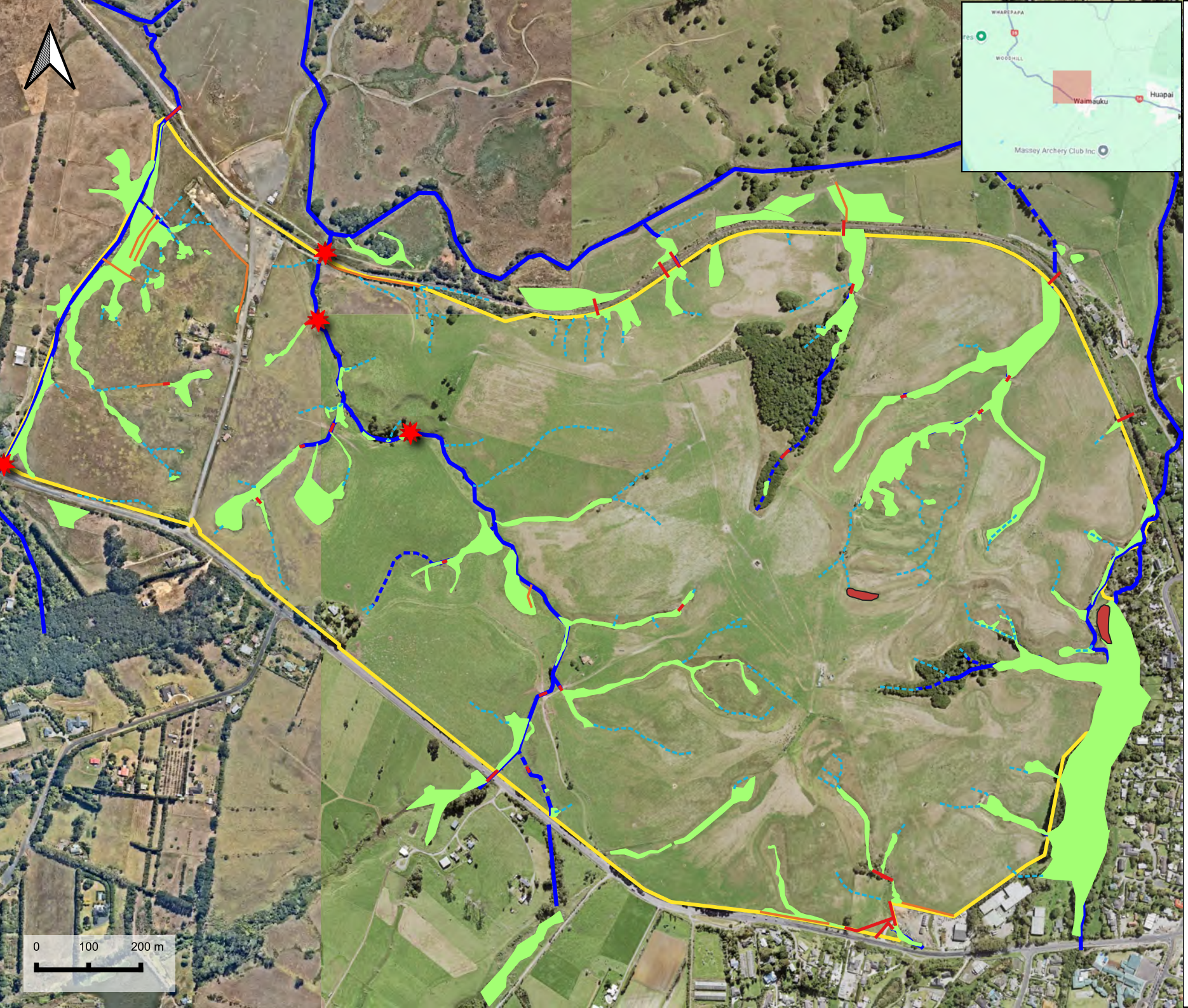

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Ecological Constraints Overview - Freshwater

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site
- Natural inland wetlands
- Permanent stream
- Modified permanent stream
- Intermittent stream
- Modified intermittent stream
- Ephemeral streams / OLFPs
- Artificial watercourses
- Culverts
- Fish passage barriers
- Artificial pond

SOURCES

Aerial sources: Nearmap 2025, Auckland Council 0.075m Urban Aerial Photos 2017

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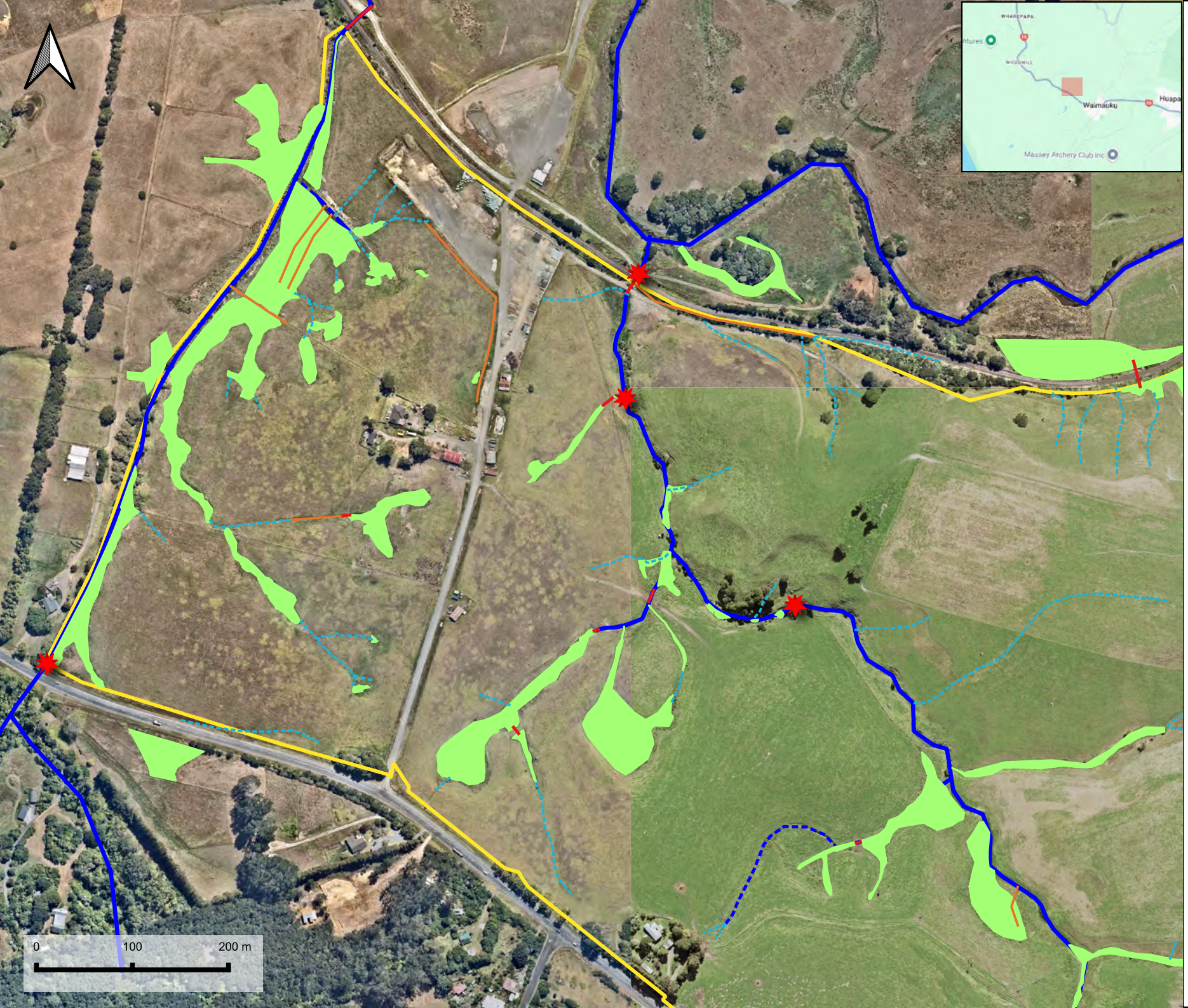

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Ecological Constraints - Freshwater - western side

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site
- Natural inland wetlands
- Permanent stream
- Modified permanent stream
- Intermittent stream
- Ephemeral streams / OLFPs
- Artificial watercourses
- Culverts
- Fish passage barriers

SOURCES

Aerial sources: Nearmap 2025, Auckland Council 0.075m Urban Aerial Photos 2017

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Ecological Constraints - Freshwater - eastern side

Waimauku West Fast Track Application

Halberd Holdings Ltd

Legend

- Site
- Natural inland wetlands
- Permanent stream
- Modified permanent stream
- Intermittent stream
- Modified intermittent stream
- Ephemeral streams / OLFPs
- Artificial watercourses
- Culverts
- Fish passage barriers
- Artificial pond

SOURCES

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Attachment B

Draft Master Plan

Figure 14 - Illustrative Masterplan

2.4 Illustrative Masterplan

The Illustrative Masterplan presents a vision for urban development of the site. Key landscape and ecological features of the site are maintained whislt facilitating a vareity of residential typologies that respond to the market. Depending on detailed design it is estimated that the site could accommodate between 1,500 and 2,020 new residential dwellings.

Provision has also been made for two potential school sites (subject to further discussion with MoE), a neighbourhood centres and parks, land for business uses, stormwater management, and recreational trails.